

ABSTRACT

5 A waterproof recreational audio device and method that transmits sound via
transcutaneous bone conduction provides high fidelity musical signals to a user. The device can
be worn on the head of a user and integrated into various types of headgear. The device is
tunable for sound quality and comfort by adjusting and moving the sound transmitting
transducers around the head of the user. The present invention preferably uses transducers to
produce sounds in the low, mid and high frequency ranges. A sound source for the musical
10 signal can also be provided as part of the waterproof recreational audio device. Controls enable
the user to select volume levels for the high, mid and low frequency ranges, while a volume
limiter restricts the mid range to a preset maximum volume level to allow external ambient
sounds to be heard via the ear canal and protects the hearing of the user.